



Decision Making Behaviour of Fisherwomen of Dakshina Kannada District of Karnataka - An Empirical Analysis

V. Mahesh², P. S. Swathi Lekshmi^{1*}, S. Benakappa², A. S. Kumar Naik², Jitendra Kumar² and S. Vijay Kumar Reddy²

¹Mangalore Research Centre of Central Marine Fisheries Research Institute, Mangalore - 575 001, India

²College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore - 575 002, India

Abstract

Among the different sectors of the Indian economy where women contribute significantly, fisheries sector occupies a prime place. Out of the total fisherfolk population of Karnataka, comprising 1 67 429, around 23 000 fisherwomen are actively involved in fisheries related activities such as marketing of fish, net making/repairing, curing/processing, peeling, labour and other miscellaneous activities. Though, studies have captured the pivotal role played by fisherwomen in income generation for their families, the decision making behavior, a key parameter of their empowerment status, remains an unexplored area. The present study deals with the areas of decision making in which fisherwomen are involved and the influence of socio-economic status on their decision making behavior. The study was undertaken in three selected villages in Dakshina Kannada district of Karnataka using multi stage random sampling method. From the findings, it was observed that, 84.16% of female fresh fish vendors had medium level of decision making behaviour. Fisherwomen were observed to be the sole and independent decision makers with respect to all aspects of fish marketing such as source of fish purchase, rate and quantity to be purchased, transportation, quantity of ice to be used, selling price, time of fish sales, purchasing and hiring of equipment and getting and repaying credits. Results of the multiple regression analysis revealed that, among the profile characteristics studied, the variable namely self-confidence showed a high and positive significant contribution

towards decision making behavior of the female fish vendors.

Keywords: Decision making, fisherfolk, fish vending, self-confidence, fisherwomen

Introduction

Fisheries sector in India is a major source of livelihood for a large section of coastal and adjacent inland population. According to the marine census of India (CMFRI, 2010), the total marine fisher folk population of nine coastal states and two union territories in mainland India is 39 99 214. Of the 7 56 391 fisher folk involved in fishing related activities, 3 65 463 are women (48%) with 1 52 692 of them engaged in marketing of fish, compared to 54 670 men (Sharma, 2010). One of the most striking phenomena of recent times has been the increasing proportion of women in the labour force, in many parts of the country, which has enabled them to utilize their potential in the labour market, thus moving towards economic independence. This informal sector represents a significant segment of the labour market especially in developing economies. It plays a major role in employment creation, raising production and income generation.

The fishing community is mostly dependent on the fishery resources for their livelihood and the role that fisherwomen play in this is of great importance for maintenance of the family (Yahaya, 1988). However, the major roles played by the women are in processing (52%) and fish marketing and distribution (42%) (Obande et al., 2005). Fish vending offers the best opportunity to earn higher income in terms of average annual working hours provided (Khader & Sathiadhas, 2006). The concept of promoting income-generating activities for women emerged only recently as they contribute significantly to

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* E-mail: swathi.lekshmi263@gmail.com

socio-economic welfare of their families. The fisherwomen are also involved in decision making regarding expenditure pattern and household activities. In spite of taking such responsibilities on both domestic and income generation for the improvement of their household like the health of children, education and nutritional requirements, their efforts are not recognized adequately. It has been reported that when their income level deteriorated with loss of their share in fish trade, women experienced loss of power at home in decision making (Bhatta & Rao, 2003). Variables such as family size, family type, annual income, and utilization of information sources were significantly associated with decision making process of women in different fishery activities (Goswami & Danas, 2007).

Fisherwomen are able to contribute effectively for fisheries development, through their increased participation in decision making (Williams et al., 2002). Fisherwomen face a whole series of complex, cultural, social, traditional, economic and legal constraints that even poor men did not face and therefore, society has to consider women's participation in all activities that could bring about a sea of change in the process of improvement of social structure as witnessed in China (Dehadrai, 2005). In this context, the present study attempts to discuss the decision making behavior and the characteristics which played a dominant role in their involvement in decision making of fisherwomen of Dakshina Kannada district of Karnataka.

Materials and Methods

Multi stage random sampling procedure was followed for the study. Out of the three coastal districts of Karnataka, Dakshina Kannada district was selected for the study. This district consists of 21 fishing villages. Of this, the villages which had maximum number of women fish vendors such as Bengre, Surathkal and Ullala were selected. Proportionate random sampling technique was employed to select 40 respondents each from the three selected fishing villages thus constituting a total sample size of 120 respondents for the study. The data were collected using well structured interview schedules. Mean and standard deviation were used besides frequencies and percentages to explain the different socio-personal, socio-economic and socio-psychological characteristics of women fish vendors and the data were further analyzed using SPSS™ Software.

Results and Discussion

The present study showed that majority of women fish vendors were involved in medium level of decision making behavior (84.16%) followed by low and high levels (9.18% and 6.66%) respectively (Table 1). Participation of fisherwomen in decision making was assessed in the major decision making areas and also in specific items under each area. A similar study conducted by Jayaraman (2005) on the performance analysis of fisherwomen in Tamil Nadu revealed that, fisherwomen in self-help groups (SHG) were more or less equal partners in decision making. Husbands of some of the SHG fisherwomen admitted that, their wives contributed to the family welfare and income, apart from attending to their domestic chores and so they could no longer ignore the contribution and role of their wives in the family decision making process. These findings draw the support of the findings of Williams et al. (2002), Bhatta & Rao (2003), Giannetti & Simonov (2003), Chaturvedi (2004), Ojha et al. (2005), Goswami & Danas (2007), Sahu et al. (2009) and Khader (2013) which observed that the fisherwomen were able to contribute effectively to the family's socio-economic status and to fisheries development through their increased participation in decision making. However in an earlier study conducted by Anbarasan (1985) in the fishing villages of Tamil Nadu, it was observed that decision making at the village level was restricted to fishermen. Fisherwomen are non-entities and cannot assume any leadership position in the village while they are expected to abide by the decisions made by male leaders of the village.

Majority of fisherwomen in the study, had a major say in operational decisions such as segregation of the fishes according to their size as well as method of display of fish and the quantity of ice to be used during the sales. About 100% had exercised decision making in the quantity of fish to be purchased.

Table 1. Distribution of women fish vendors according to their decision making behavior

Decision making behavior	Respondents	
	Frequency	Percentage
Low level	11	09.18
Medium level	101	84.16
High level	08	06.66
Total	120	100.00

Further, fisherwomen were allowed to take their own decisions in most of the fish vending and related activities (Table 2). This is due to the fact that male members of the family are involved in fishing activities. But as far as savings and their earnings were concerned, they also take into consideration, the suggestions of the family members. In case of availing loans and credits from the bank, co-operative society or money lenders and construction of shelter houses for fish marketing, they rarely take their own decisions.

Table 2. Areas of self-decision making in fish vending and its related activities

Decision making areas	No. of fisherwomen	%
Operational decisions		
Source of fish purchase (Boat owner/auctioneer/wholesaler/retailer)	117	97.50
Variety of fish and selection of fish	117	97.50
Marketing		
Quantity to be sold	120	100
Area of selection to sell the fish	120	100

The area of self-decision making in home related activities is presented in Table 3. Majority of the fisherwomen (80%) made their own decisions to invest their savings in chit companies. A study conducted by Ashaletha et al. (2002) revealed that fisherwomen tend to shy away from formal institutional sources such as public banks and post offices due to the formal administrative procedural complexities and difficulties involved in both accessing credit as well as mobilization of their savings. Transactions in chit companies involved only oral dealings. It could be further inferred that, a vast majority (81.66%) depended on friends and relatives followed by co-operatives (74.16%) for borrowing of loans.

Studies conducted by Shyam (2013) revealed gender discrimination of fisherwomen in the economic activities compared with the men-folk during handling of bulk quantities of fish and fishery products like transportation, storage, access to credit from institutional agencies and difficulties during auction. With respect to social activities, it was observed that 64.16% took own decision in participation in

Table 3. Area of self-decision making in home related activities

Decision making areas	No. of fisherwomen	%
Saving		
On whose name in which savings had to be made	37	30.83
Place of savings		
Post office	43	35.83
Bank	28	23.33
Chit companies	96	80.00
Private banks (like ICICI / IDBI)	0	0
Borrowing of loans		
Source		
Banks	10	8.33
Co-operatives	89	74.16
Friends and relatives	98	81.66
Amount to be borrowed	25	20.83
Time of repayment	22	18.33
Lending		
Amount to be lent	33	27.50
Lending inputs	32	26.66
Social activities		
Village co-operative society	77	64.16
Visiting relatives outside the village	51	42.50

village co-operative societies. The study conducted by Shetty & Sreedhara (2011) revealed that fisherwomen co-operatives in Dakshina Kannada district of Karnataka were effective in rendering economic assistance to the dispersed and disorganized fisherwomen, whose dependence on merchants and middlemen is even greater than that of those following agricultural pursuits.

Relationship between characteristics of the respondents and their decision making behaviour was worked out by means of correlation analysis and computed 'r' values are presented in Table 4. The present study inferred that economic motivation, risk orientation and self-confidence had a high and positive significant relationship ($p < 0.01$) and social participation had a positive and significant relationship ($p < 0.05$) with decision making behaviour of women fish vendors.

Table 4. Correlation and multiple regression analysis of independent variables with decision making behavior (n=120)

Independent variables	Women fish retailers (n=120) Correlation coefficient	Partial regression coefficient (b)	SE (b)	't' value
Age	-0.076 NS	-0.069	1.913	-0.576 NS
Education	0.063 NS	-0.198	0.598	-1.668 NS
Annual income	0.145 NS	0.073	1.878	0.752 NS
Family size	0.009 NS	-0.140	2.565	-1.017 NS
Family type	0.075 NS	0.115	2.666	0.864 NS
Occupational experience	-0.067 NS	-0.075	0.095	-0.669 NS
Mass media participation	0.117 NS	0.063	0.496	0.603 NS
Contact with extension agency	0.135 NS	0.047	0.522	0.409 NS
Social participation	0.220 *	0.134	0.472	1.114 NS
Credit orientation	0.0130 NS	0.059	0.961	0.556 NS
Economic motivation	0.290 **	0.147	0.671	1.119 NS
Risk orientation	0.267 **	0.026	0.812	0.189 NS
Self confidence	0.278**	0.291	1.761	2.882 **
Level of awareness	0.162 NS	-0.018	1.080	-0.156 NS
Level of participation	0.142 NS	-0.008	1.19	-0.071 NS

$R^2 = 0.193$; $a = 219.485$; $F = 1.660$ NS; ** Significant at 1% level; * Significant at 5% level; NS -Non significant

The zero order correlation revealed the nature of relationship that existed between independent and dependent variables. However, multiple regression analysis was worked out for studying the functional relationship between independent and dependant variables and the results are furnished in Table 4 and shows that except for self confidence, all other variables had no significant influence towards the decision making behaviour of women fish vendors. Keeping all other factors constant, one unit increase of self confidence would increase 0.291 *ceteris paribus* units in the dependent variable *viz.*, decision making behavior. Studies of Villareal & Upare (2003), Jayaraman (2005), FAO (2010) and Khader (2013) revealed that the women fish vendors' confidence level increased when they actively joined the fisherwomen co-operative societies and Self-Help Groups, that provide them with financial assistance, trainings and moral support which in turn helped them to carry their fish marketing activities and participation in household decision making. FAO (2007) on gender-responsive institutions for accessing and managing resources reveal that community organizations, such as fishers' organizations and women's groups, play a vital role in decision making and invoicing their particular interests to obtain

support from the projects implemented by the Government of Bangladesh. Thus, it is important to identify and strengthen community organizations before introducing alternative income-generating activities. Targeting women as special beneficiaries could be counterproductive or atleast insufficient to improve their contribution as well as benefits from development. It is important to take overall structural factors into consideration, including the rules and practices of households and communities, market behavior, and particular characteristics of relationships between men and women in society. The value of coefficient of multiple regressions (R^2) was 0.193 implying that all the 15 independent variables could explain 19% variation in the dependent variable, decision making behaviour.

The results of the investigation indicated that majority of the women fish vendors had medium level of empowerment status. The psychological characteristics namely economic motivation, risk orientation and self-confidence exhibited a highly significant and positive relationship with the decision making behaviour of women fish vendors, and the variable social participation had contributed significantly and positively towards decision

making behaviour of women fish vendors. Self confidence was identified as a crucial variable since it exerted maximum influence on decision making behavior of women fish vendors. It clearly indicates that, as self-confidence of the respondent increases, she is likely to participate more actively in decision making process and thus develop a positive attitude towards making decisions.

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References

- Anbarasan, K. (1985) Factors that influence the role and status of fisherwomen. Working Papers, BOBP/WP/33. www.fao.org/docrep/007/ae101e/ae101e00.html (Accessed 15 May 2013)
- Ashaletha, S., Ramachandran, C., Immanuel, S., Diwan, A. D. and Sathiadhas, R. (2002) Changing roles of fisherwomen of India: issues and perspectives. In: Proceedings of International Conference on Women in Fisheries, Mumbai
- Bhatta, R. and Rao, K. A. (2003) Women's livelihood in fisheries in coastal Karnataka, India. *Indian J. Gend. Stud.* 10(2): 262-278
- Chaturvedi, G. (2004) Women in fisheries on the east coast of India, A Review, p 66, Bay of Bengal Programme, West Bengal, India
- CMFRI (2010) Marine Fisheries Census, Karnataka 2010, Department of Animal Husbandry, Dairy and Fisheries Sciences, New Delhi and CMFRI, ICAR, New Delhi
- Dehadrai, P. V. (2005) Women at the centre stage for socio-economic changes in fishing community. In: Women Empowerment in Fisheries (Ninawe, A. S. and Diwan, A. D., Eds), pp17-22, Narendra Publishing House, New Delhi
- FAO (2007) Gender in fisheries and aquaculture overview. In: Gender in Agriculture, pp 561-599, Published by FAO, Rome
- FAO (2010) www.fao.org/docrep/006/AD125E/AD125E04.html (accessed 18 May 2013)
- Giannetti, M. and Simonov, A. (2003) Social interactions and entrepreneurial activity. pp 1-15, Department of Finance and Site, Stockholm School of Economics, CEPR and ECGI, Stockholm, Sweden
- Goswami, B. and Danas, S. S. (2007) Factors associated with women's decision making in different fishery activities. *Indian J. Anim. Res.* 41(2): 144-146
- Jayaraman, R. (2005) Performance analysis of fisherwomen self-help groups in Tamil Nadu - Final report submitted to National Bank for Agricultural and Rural Development. 44 p, Department of Fisheries Resources and Economics, Fisheries College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Tamil Nadu
- Khader, V. and Sathiadhas, R. (2006) Role of fisherwomen in coastal eco-system of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu- An overview. Paper presented at the 22nd Annual Conference, Clearwater Beach, Florida, 14-19 November, 2006
- Khader, V. (2013) Socio-economic empowerment of fisherwomen in southern states of India. *Fish. Technol.* 50: 258-264
- MSSRF (2009) Crab fattening: an alternate livelihood for fisherwomen. www.mssrf.org/ecotech/ebook/et-pub-08.pdf (Accessed 15 May 2013)
- Obande, R. A., Tiamiyu, L.O. and Itodo, S.O. (2005) The role of women in artisanal fisheries along the lower Benue River. Paper presented in 19th Annual Conference of the Fisheries Society of Nigeria (FISON), Llorin, Nigeria, 29 November-03 December, 2004
- Ojha, S. N., Sharma, A. and Salim, S. S. (2005) Institution building process of a fisherwomen society. In: Women Empowerment in Fisheries (Ninawe, A. S. and Diwan, A.D., Eds), pp 249-260, Narendra publishing house, New Delhi
- Sahu, N. C., Issac, A. and Bali, S. K. (2009) Economy of the fisherwomen in Ganjam district of Orissa: Conditions for environmental governance and sustainable development. A report presented in the Biennial Conference of the Indian Society for Ecological Economics (INSEE) on Environmental Governance, Ahmedabad, 21-23
- Sharma, C. (2010) Women fish vendors in India: an information booklet. In: Draft for Comments (Kumar, K. G., Eds), pp 1-10, ICSF Publications, Chennai
- Shetty, S. Pramila and Sreedhara, T. N. (2011) Women empowerment and cooperatives- a comparative study of general cooperatives and fisheries cooperatives. 2 (6): 62 p

- Shyam, S. Salim. (2013) Gender mainstreaming and women empowerment – reflections and upshots from fishing industry of Kerala. *Discovery Agriculture*. 1(1): 51-59
- Villareal, L. V. and Upare, M. A. (2003) Best practices and success stories in microfinance and income-generating communities - Report of the National Workshop on Best Practices in Microfinance Programmes for Women in Coastal Fishing Communities in India. 50 p, FAO, Rome
- Williams, M. J., Williams, S. B. and Choo, P. S. (2002) From women in fisheries to gender in fisheries. Paper presented at the Global Symposium on Women in Fisheries, Sixth Asian Fisheries Forum, Kaohsiung, Taiwan, 29 November 2001
- Yahaya, J. (1988) Role and status of women in small-scale fisheries. *The Role, Status and Income-earning Activities of Women in Small-scale Fisheries*. pp 1-55, Peninsular Malaysia, FAO, Rome